

# MLC Series AC Contactors

## AC Contactor Series MLC

### Appearance

- Current range 6-780 (06,09,12,18,25,32,40,50,65,80,95,115,150,185,225,265,330,400,500,630,780A)
- Poles: 3P, 4P

3P



Frame Size (A)	6,9,12	9,12,18	25,32
Type	Mini type MLC-K	Normal type MLC-D	
Power (KW, 400V)	2.2,4,5.5	4.5,5,7.5	11,15

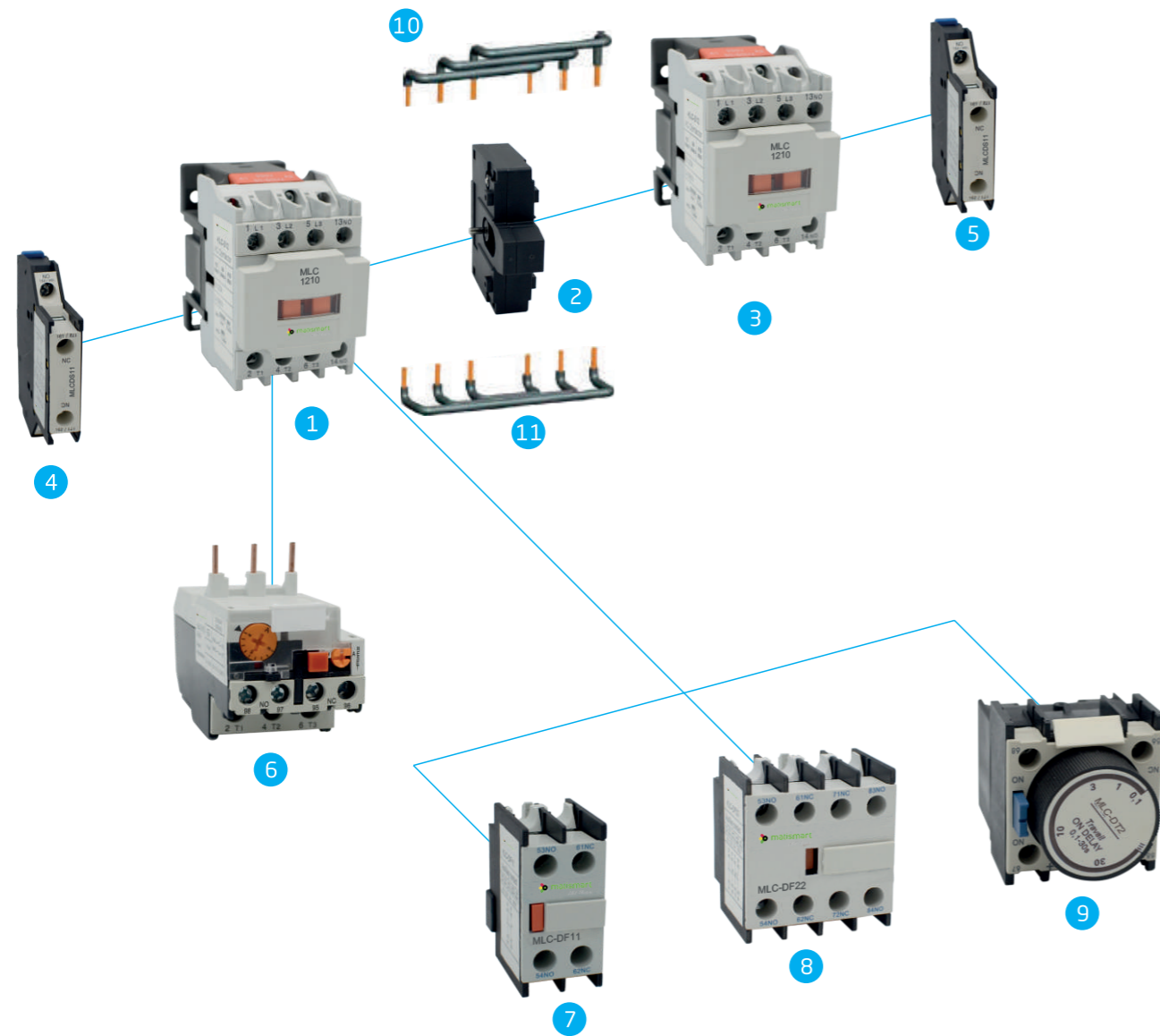


Frame Size (A)	40,50,65	80,95
Type	Normal type MLC-D	
Power (KW, 400V)	18.5,22,30	37,45



Frame Size (A)	115,150,170	225,265,300	400,500
Type		Big type MLC-F	
Power (KW, 400V)	55,75,90	110,132,160	200,250

Appearance



1. Contactor
2. Mechanical interlock block
3. Contactor
4. Side mounting Auxiliary
5. Side mounting Auxiliary
6. Thermal relay
7. Front mounting Auxiliary
8. Front mounting Auxiliary
9. Time- Delay auxiliary contact
10. Bus bar
11. Bus bar

Instruction of type code

For Ac contactor MLC

Rated working current in AC-3 400VAC  
(06,09,12,18,25,32, 40,50,65,80,95,115, 150,185,225,265,330, 400,500,630,780A)

Coil voltage (please check following details)

Company code: M

Product code: LC

Reversing contacts: D, N

Auxiliary contact:  
10: 1NO (Ie<=32A)  
01: 1NC (Ie<=32A)  
11: 1NO+1NC (Ie>=40A)  
04: 4NO (number of main contact)  
22: 2NO+2NC (number of main contact)

Coil voltage Us(V)	24	36	48	110	127	220	230	240	380	415	440	480	500	600	660
50Hz	B5	C5	E5	F5	G5	M5	P5	U5	Q5	N5	R5	T5	S5	-	Y5
60Hz	B6	-	E6	F6	G6	M6	P6	U6	Q6	N6	R6	T6	-	W6	-
50/60Hz	B7	C7	E7	F7	G7	M7	P7	U7	Q7	N7	R7	T7	-	-	-

For Auxiliary contact

Rated working current in AC-3 400VAC  
(06,09,12,18,25,32, 40,50,65,80,95,115, 150,185,225,265,330, 400,500,630,780A)

Coil voltage (please check following details)

Company code: M

Product code: LC

Auxiliary contact type: F, S

Auxiliary contact:  
02: 2NC; 11: 1NO+1NC;  
20: 2NO; 04: 4C;  
13: 1No+3NC; 22: 2NO+2NC;  
31: 3No+1NC; 40: 4NO

For Time-delay auxiliary contact

Rated working current in AC-3 400VAC  
(06,09,12,18,25,32, 40,50,65,80,95,115, 150,185,225,265,330, 400,500,630,780A)

Coil voltage (please check following details)


Company code: M

Product code: LC


Delay type: T, D

Time-delay range:  
0.1-3s  
0.1-30s  
10-180s

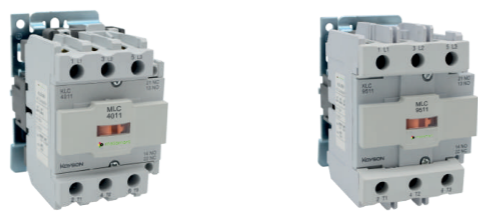
**Technical Parameter for type MLC-K**

Model	MLC-K06	MLC-K09	MLC-K12	
Electric features				
Picture				
Standards	IEC60947-4-1			
Approvals	CE			
Poles	3,4			
Number of contacts	3+NO,3+NC,4NO,2NO+2NC			
Rated conventional thermal current Ith in AC1	A	20		
Rated operational voltage Ue	Vac	690		
Rated insulation voltage Ui	Vac	690		
Rated impulse withstand voltage Uimp	kA	8	8	8
Rated frequency	Hz	50/60		
Rated operational current				
AC3/AC4 380/400V	A	6	9	12
AC3/AC4 660/690V	A	2.6	3.8	5
Rated operational power in category AC-3				
220/230/240V	kW	1.5	2.2	3
380/400V	kW	2.2	4	5.5
660/690V	kW	3	4	5.5
Rated making capacity	A	110	110	114
Rated breaking capacity				
@380V	A	100	100	100
@690V	A	70	70	70
Short-circuit protection (gG fuse U<=440V)	A	25		
Average impedance per pole (mW)	mW	3		
Mechanical features	Add-on auxiliary contact blocks			
Front	yes			
Side	NO			
Front time delay	NO			
Front dust and damp protected	NO			
Reversing contactor type	MLC-KN			
Associated thermal overload relays	MLR-K			
Operation cycles				
Electrical AC-3	Times/hour	1200	1200	1200
Electrical AC-4	Times/hour	300	300	300
Mechanical	Times/hour	3600	3600	3600
Electrical life (X 10 <sup>3</sup> )				
AC-3	Times	100		
AC-4	Times	20		
Mechanical life (X 10 <sup>6</sup> )	Times	10		
Matching fuse model		RT16-16	RT16-20	RT16-20
Tightening torque(N·m)		0.8		
Connection				
Screw clamp terminals				
solid conductor	mm <sup>2</sup>	Max. 1X4+1X2.5		
Felexible conductor without cable end	mm <sup>2</sup>	Max. 2X2.5		
Felexible conductor with cable end	mm <sup>2</sup>	Max. 1X1.5+1X2.5		
Degree of protection		IP20		
Ambient air temperature		,-5 to +40°C,max. 95 % humidity		
Storage temperature		,-40 ... +75°C		
Maximum operating altitude (meters)		2000		
Flame resistance		V1		


**Technical Parameter for Type MLC-D**

Model	MLC-D09	MLC-D12	MLC-D18	MLC-D25	MLC-D32	
Electric features						
Picture						
Standards	IEC60947-4-1					
Approvals	CE					
Number of poles	3,4	3,4	3,4	3,4	3	
Rated operational current Ie						
In AC-3	A	9	12	18	25	32
In AC-1	A	25	25	32	40	50
Rated operational voltage Ue	Vac	690				
Rated conventional thermal current Ith	A	25	25	32	40	50
Rated insulation voltage Ui	V	690				
Rated impulse withstand voltage Uimp	kA	6				
Rated frequency	Hz	50/60				
Rated making capacity @ 400V	A	250	250	300	450	550
Rated breaking capacity @ 400V	A	250	250	300	450	550
Rated operational power in category AC-3 (kw)						
in 230V		2.2	3	4	5.5	7.5
in 400V		4	5.5	7.5	11	15
in 690V		5.5	7.5	10	15	18.5
Fuse protection against short-circuit						
Without therma overload relay, Gg fuse Type 1	A	25	40	50	63	63
Type2	A	20	25	35	40	63
With thermal overload relay	A	see specification and ording data of MLR-D, for aM or gG fuse ratings corresponding to the associated thermal overload relay				
Average impedance per pole	mW	2.5	2.5	2.5	2	2
Mechanical features	Add-on auxiliary contact blocks					
Front	yes					
Side	yes					
Front time delay	yes					
Front dust and damp protected	yes					
Reversing contactor type	MLC-DN					
Associated thermal overload relays		MLR-D13	MLR-D13	MLR-D13	MLR-D23	
Operation cycles						
Electrical AC-3	Times/hour	1200	1200	1200	1200	600
Electrical AC-4	Times/hour	300	300	300	300	300
Mechanical	Times/hour	3600	3600	3600	3600	3600
Electrical life (X 10 <sup>3</sup> ) in AC-3	times	1000	1000	1000	1000	800
AC-4	times	200	200	200	200	200
Mechanical life (X 10 <sup>6</sup> times)	times	10	10	10	10	8
Tightening torque	N·M	0.8	0.8	0.8	1.2	1.2
Connection-Cabling cross section (CU)		,2.5	,2.5	4	4	4
Flexible cable with cold-pressed 2 socket	mm <sup>2</sup>	,4	,4	,6	,10	,16
Flexible cable without cold-2 pressed socket	mm <sup>2</sup>	,4	,4	6	6	6
Inflexible 2 cable Screw size	mm <sup>2</sup>	M3.5	M3.5	M3.5	M4	M4
Degree of protection		IP20				
Ambient air temperature		,-5 to +40°C,max. 95 % humidity				
Storage temperature		,-40 ... +75°C				
Maximum operating altitude (meters)		2000				
Flame resistance		V1				

**Technical Parameter for Type MLC-D**

Model	MLC-D40	MLC-D50	MLC-D65	MLC-D80	MLC-D95	
Picture						
Standards	IEC60947-4-1					
Approvals	CE					
Number of poles	3	3, 4	3, 4	3, 4	3, 4	
Rated operational current Ie						
In AC-3	A	40	50	65	80	95
In AC-1	A	60	80	80	125	125
Rated operational voltage Ue	Vac	690				
Rated conventional thermal current Ith	A	60	80	80	125	125
Rated insulation voltage Ui	V	690				
Rated impulse withstand voltage Uimp	kA	6				
Rated frequency	Hz	50/60				
Rated making capacity @ 400V	A	800	900	1000	1100	1100
Rated breaking capacity @ 400V	A	800	900	1000	1100	1100
Rated operational power in category AC-3 (kw)						
in 230V		11	15	18.5	22	25
in 400V		18.5	22	30	37	45
in 690V		30	33	37	45	45
Fuse protection against short-circuit						
Without thermal overload relay, Gg fuse Type 1	A	80	100	125	200	200
Type2	A	80	100	125	160	160
With thermal overload relay	A	see specification and ordering data of MLR-D, for aM or gG fuse ratings corresponding to the associated thermal overload relay				
Average impedance per pole	mW	1.5	1.5	1.5	0.8	0.8
Add-on auxiliary contact blocks						
Front	yes					
Side	yes					
Front time delay	yes					
Front dust and damp protected	yes					
Reversing contactor type	MLC-DN					
Associated thermal overload relays	MLR-D33					
Operation cycles						
Electrical AC-3	Times/hour	600	600	600	600	600
Electrical AC-4	Times/hour	300	300	300	300	300
Mechanical	Times/hour	3600	3600	3600	3600	3600
Electrical life (X 10 <sup>3</sup> ) in AC-3	times	800	600	600	600	600
AC-4	times	150	150	150	100	100
Mechanical life (X 10 <sup>6</sup> times)	times	8	8	8	6	6
Tightening torque	N·M	1.2	1.2	1.2	4	4
Connection-Cabling cross section (CU)		10	16	16	50	50
Flexible cable with cold-pressed 2 socket	mm <sup>2</sup>	16	25	25	50	50
Flexible cable without cold-2 pressed socket	mm <sup>2</sup>	10	25	25	50	50
Inflexible 2 cable Screw size	mm <sup>2</sup>	M8	M6	M8	M10	M10
Degree of protection	IP20					
Ambient air temperature	,-5 to +40°C,max. 95 % humidity					
Storage temperature	,-40 ... +75°C					
Maximum operating altitude (meters)	2000					
Flame resistance	V1					

**Technical Parameter for type MLC-F**

Models	MLC-F115	MLC-F150	MLC-F185	MLC-F225	MLC-F265	
Picture						
Standards	IEC60947-4-1					
Approvals	CE					
Number of poles	3, 4	3, 4	3, 4	3, 4	3	
Rated operational current Ie						
In AC-3 @400V	A	115	150	185	225	265
In AC-1 @400V	A	200	250	275	315	350
Rated operational voltage Ue	V	1000				
Frequency limits of the operationa current	HZ	16-200				
Rated conventional thermal current Ith AC-1	A	200	200	275	315	350
Rated insulation voltage Ui	V	1000				
Rated impulse withstand voltage Uimp (kA)	kA	8				
Rated frequency	Hz	50/60				
Rated making capacity						
in AC-3 @400V	A	1150	1500	1850	2250	2650
in AC-4 @400v	A	1380	1800	2220	2700	3180
Rated breaking capacity						
in AC-3 @400V	A	920	1200	1480	1800	2120
in AC-4 @400v	A	1150	1500	1850	2250	2650
Rated operational power in category AC-3						
@ 220V,230,240V	kW	30	40	55	63	75
@ 380,400V	kW	55	75	90	110	132
@ 660,690V	kW	80	100	110	129	160
Short-circuit protection by fuses						
Motor circuit (type aM)	A	125	160	200	315	400
With thermal overload relay (type gG)	A	200	200	315	500	500
gG fuses	A	200	250	315	400	500
Average impedance per pole	mW	0.37	0.35	0.33	0.32	0.3
Add-on auxiliary contact blocks						
Front	Yes					
Side	NO					
Front time delay	Yes					
Front dust and damp protected	NO					
Reversing contactor type	MLC-FN					
Associated thermal overload relays	MLR-F53					
Operation cycles in AC-3	times/hour	1200	1200	600	600	600
Electrical life (X 10 <sup>6</sup> )	times	1.2	1.2	1	1	0.8
Mechanical life (X 10 <sup>6</sup> )	times	10	10	6	6	6
Tightening torque	N·M	0.8	0.8	0.8	1.2	1.2
Connection						
Cabling cross section CU	mm <sup>2</sup>	70	70	120	120	185
Screw size		M3	M6	M6	M10	M10
Degree of protection	IP20					
Ambient air temperature	,-5 to +40°C,max. 95 % humidity					
Storage temperature	,-40 ... +75°C					
Maximum operating altitude (meters)	2000					
Flame resistance	V1					

**Technical Parameter for type MLC-F**

Models	MLC-F330	MLC-F400	KLC-F500	MLC-F630	MLC-F780	
Pictures						
Standards	IEC60947-4-1					
Approvals	CE					
Number of poles	3	3, 4	3, 4	3, 4	3, 4	
Rated operational current Ie						
In AC-3 @400V	A	330	400	500	630	780
In AC-1 @400V	A	400	500	700	1000	1600
Rated operational voltage Ue	V	1000				
Frequency limits of the operationa current	HZ	16-200				
Rated conventional thermal current Ith AC-1	A	400	500	700	1000	1600
Rated insulation voltage Ui	V	1000				
Rated impulse withstand voltage Uimp (kA)	kA	8				
Rated frequency	Hz	50/60				
Rated making capacity						
in AC-3 @400V	A	3300	4000	5000	6300	7800
in AC-4 @400v	A	3960	4800	6000	7560	9360
Rated breaking capacity						
in AC-3 @400V	A	2640	3200	4000	5040	6240
in AC-4 @400v	A	3300	4000	5000	6300	7800
Rated operational power in category AC-3						
@ 220V,230,240V	kW	100	110	147	200	220
@ 380,400V	kW	160	200	250	335	400
@ 660,690V	kW	220	280	355	450	475
Short-circuit protection by fuses						
Motor circuit (type aM)	A	400	500	630	800	
With thermal overload relay (type gG)	A	630	800	800	1000	
gG fuses	A	500	800	1000	1000	
Average impedance per pole	mW	0.28	0.26	0.18	0.12	0.1
Add-on auxiliary contact blocks						
Front	Yes					
Side	NO					
Front time delay	Yes					
Front dust and damp protected	NO					
Reversing contactor type	MLC-FN					
Associated thermal overload relays	MLR-F53					
Operation cycles in AC-3	times/hour	600	600	600	600	600
Electrical life (X 10 <sup>6</sup> )	times	0.8	0.8	0.8	0.8	0.8
Mechanical life (X 10 <sup>6</sup> )	times	6	6	6	6	6
Tightening torque	N·M	1.2	1.2	1.2	4	4
Connection		240	240	185	240	300
Cabling cross section CU	mm <sup>2</sup>	M10	M10	M10	M14	M14
Screw size						
Degree of pretection	IP20					
Ambient air temperature	,-5 to +40°C,max. 95 % humidity					
Storage temperature	,-40 ... +75°C					
Maximum operating altitude (meters)	2000					
Flame resistance	V1					

Electric features



Mechanical features

**Ordering information**




Picture	Rated operational current in category AC-3 400V (A)	Main Contacts	Auxiliary contacts	Poles	Rated operational power in category AC-3(KW)	Standard control circuit voltages (Vac)	Rated frequency (Hz)	Type Code		
	6	3 - 1 -	1 -	3	1.5	230	50/60	MLC-K0610P7		
		3 - - 1	-	3	1.5	230	50/60	MLC-K0601P7		
		4 - - -	-	4	1.5	230	50/60	MLC-K0604P7		
		2 2 - -	-	4	1.5	230	50/60	MLC-K0622P7		
		3 - 1 -	1 -	3	2.2	230	50/60	MLC-K0910P7		
		3 - - 1	-	3	2.2	230	50/60	MLC-K0901P7		
	9	4 - - -	-	4	2.2	230	50/60	MLC-K0904P7		
		2 2 - -	-	4	2.2	230	50/60	MLC-K0922P7		
		3 - 1 -	1 -	3	3	230	50/60	MLC-K1210P7		
		3 - - 1	-	3	3	230	50/60	MLC-K1201P7		
		4 - - -	-	4	3	230	50/60	MLC-K1204P7		
		2 2 - -	-	4	3	230	50/60	MLC-K1222P7		
	6	3 - 1 -	1 -	3	1.5	230	50/60	MLC-KN0610P7		
		3 - - 1	-	3	1.5	230	50/60	MLC-KN0601P7		
		3 - 1 -	1 -	3	2.2	230	50/60	MLC-KN0910P7		
		3 - - 1	-	3	2.2	230	50/60	MLC-KN0901P7		
		3 - 1 -	1 -	3	3	230	50/60	MLC-KN1210P7		
		3 - - 1	-	3	3	230	50/60	MLC-KN1201P7		
	12	4 - - -	-	4	3	230	50/60	MLC-KN1204P7		
		2 2 - -	-	4	3	230	50/60	MLC-KN1222P7		
			9	3 - 1 -	1 -	3	2.2	230	50/60	MLC-D0910P7
				3 - - 1	-	3	2.2	230	50/60	MLC-D0901P7
				4 - - -	-	4	2.2	230	50/60	MLC-D0940P7
			12	2 2 - -	-	4	2.2	230	50/60	MLC-D0922P7
3 - 1 -	1 -			3	3	230	50/60	MLC-D1210P7		
3 - - 1	-			3	3	230	50/60	MLC-D1201P7		
	12	4 - - -	-	4	3	230	50/60	MLC-D1240P7		
		3 2 - -	-	4	3	230	50/60	MLC-D1222P7		
		3 - 1 -	1 -	3	4	230	50/60	MLC-D1810P7		
		3 - - 1	-	3	4	230	50/60	MLC-D1801P7		
		25	3 - 1 -	1 -	3	5.5	230	50/60	MLC-D2510P7	
			3 - - 1	-	3	5.5	230	50/60	MLC-D2501P7	
	4 - - -		-	4	5.5	230	50/60	MLC-D2540P7		
	3 2 - -		-	4	5.5	230	50/60	MLC-D2522P7		
	32		3 - 1 -	1 -	3	7.5	230	50/60	MLC-D3210P7	
			3 - - 1	-	3	7.5	230	50/60	MLC-D3201P7	
		40	3 - 1 1	1 1	3	11	230	50/60	MLC-D4011P7	
			4 - - -	-	4	11	230	50/60	MLC-D4040P7	
2 2 - -			-	4	11	230	50/60	MLC-D4022P7		
50			3 - 1 1	1 1	3	15	230	50/60	MLC-D5011P7	
	4 - - -		-	4	15	230	50/60	MLC-D5040P7		
	2 2 - -		-	4	15	230	50/60	MLC-D5022P7		
	65	3 - 1 1	1 1	3	18.5	230	50/60	MLC-D6511P7		
		4 - - -	-	4	18.5	230	50/60	MLC-D6540P7		
		2 2 - -	-	4	18.5	230	50/60	MLC-D6522P7		
80		3 - 1 1	1 1	3	22	230	50/60	MLC-D8011P7		
		4 - - -	-	4	22	230	50/60	MLC-D8040P7		
		2 2 - -	-	4	22	230	50/60	MLC-D8022P7		
	95	3 - 1 1	1 1	3	25	230	50/60	MLC-D9511P7		
		4 - - -	-	4	25	230	50/60	MLC-D9540P7		
		2 2 - -	-	4	25	230	50/60	MLC-D9522P7		
		9	3 - 1 -	1 -	3	2.2	230	50/60	MLC-DN0910P7	
			3 - - 1	-	3	3	230	50/60	MLC-DN1210P7	
			3 - 1 -	1 -	3	4	230	50/60	MLC-DN1810P7	
	3 - 1 -		1 -	3	5.5	230	50/60	MLC-DN2510P7		
	3 - 1 -		1 -	3	7.5	230	50/60	MLC-DN3210P7		
	3 - 1 1		1 1	3	11	230	50/60	MLC-DN4011P7		
50	3 - 1 1	1 1	3	15	230	50/60	MLC-DN5011P7			
	65	3 - 1 1	1 1	3	18.5	230	50/60	MLC-DN6511P7		
		80	3 - 1 1	1 1	3	22	230	50/60	MLC-DN8011P7	
			95	3 - 1 1	1 1	3	25	230	50/60	MLC-DN9511P7

Motor control and protection

**Ordering information**

Picture	Rated operational current in category AC-3 400V (A)	Poles	Rated operational power in category AC-3(KW)	Standard control circuit voltages (Vac)	Rated frequency (Hz)	Type Code
	115	3	30	230	50/60	MLC-F1153P7
	115	4	30	230	50/60	MLC-F1154P7
	150	3	40	230	50/60	MLC-F1503P7
	150	4	40	230	50/60	MLC-F1504P7
	185	3	55	230	50/60	MLC-F1853P7
	185	4	55	230	50/60	MLC-F1854P7
	225	3	63	230	50/60	MLC-F2253P7
	225	4	63	230	50/60	MLC-F2254P7
	265	3	75	230	50/60	MLC-F2653P7
	265	4	75	230	50/60	MLC-F2654P7
	330	3	100	230	50/60	MLC-F3303P7
	330	4	100	230	50/60	MLC-F3304P7
	400	3	115	230	50/60	MLC-F1153P7
	400	4	115	230	50/60	MLC-F1154P7
	500	3	147	230	50/60	MLC-F5003P7
	500	4	147	230	50/60	MLC-F5004P7
	630	3	200	230	50/60	MLC-F6303P7
	630	4	200	230	50/60	MLC-F6304P7
780	3	220	230	50/60	MLC-F7803P7	
780	4	220	230	50/60	MLC-F7804P7	
1000	3	220	230	50/60	MLC-F10003P7	
1000	4	220	230	50/60	MLC-F10004P7	
1250	3	220	230	50/60	MLC-F12503P7	
1250	4	220	230	50/60	MLC-F12504P7	
	115	3	30	230	50/60	MLC-FN1153P7
	115	4	30	230	50/60	MLC-FN1154P7
	150	3	40	230	50/60	MLC-FN1503P7
	150	4	40	230	50/60	MLC-FN1504P7
	185	3	55	230	50/60	MLC-FN1853P7
	185	4	55	230	50/60	MLC-FN1854P7
	225	3	63	230	50/60	MLC-FN2253P7
	225	4	63	230	50/60	MLC-FN2254P7
	265	3	75	230	50/60	MLC-FN2653P7
	265	4	75	230	50/60	MLC-FN2654P7
	330	3	100	230	50/60	MLC-FN3303P7
	330	4	100	230	50/60	MLC-FN3304P7
	400	3	115	230	50/60	MLC-FN1153P7
	400	4	115	230	50/60	MLC-FN1154P7
	500	3	147	230	50/60	MLC-FN5003P7
	500	4	147	230	50/60	MLC-FN5004P7
	630	3	200	230	50/60	MLC-FN6303P7
	630	4	200	230	50/60	MLC-FN6304P7
780	3	220	230	50/60	MLC-FN7803P7	
780	4	220	230	50/60	MLC-FN7804P7	




**Ordering information**


Picture	Standard control circuit voltage(VAC)	Contactor Model matched	Frequency (Hz)	Voltage code	Type code
	24	MLC-K	50/60	B7	MLC-KD1B7
	110	MLC-K	50/60	F7	MLC-KD1F7
	127	MLC-K	50/60	G7	MLC-KD1G7
	220	MLC-K	50/60	M7	MLC-KD1M7
	230	MLC-K	50/60	P7	MLC-KD1P7
	240	MLC-K	50/60	U7	MLC-KD1U7
	380	MLC-K	50/60	Q7	MLC-KD1Q7
	440	MLC-K	50/60	R7	MLC-KD1R7
	24	MLC-D09-18	50/60	B7	MLC-KD2B7
	110	MLC-D09-18	50/60	F7	MLC-KD2F7
	127	MLC-D09-18	50/60	G7	MLC-KD2G7
	220	MLC-D09-18	50/60	M7	MLC-KD2M7
	230	MLC-D09-18	50/60	P7	MLC-KD2P7
	240	MLC-D09-18	50/60	U7	MLC-KD2U7
	380	MLC-D09-18	50/60	Q7	MLC-KD2Q7
	440	MLC-D09-18	50/60	R7	MLC-KD2R7
	24	MLC-D25-32	50/60	B7	MLC-KD4B7
	110	MLC-D25-32	50/60	F7	MLC-KD4F7
	127	MLC-D25-32	50/60	G7	MLC-KD4G7
	220	MLC-D25-32	50/60	M7	MLC-KD4M7
230	MLC-D25-32	50/60	P7	MLC-KD4P7	
240	MLC-D25-32	50/60	U7	MLC-KD4U7	
380	MLC-D25-32	50/60	Q7	MLC-KD4Q7	
440	MLC-D25-32	50/60	R7	MLC-KD4R7	
	24	MLC-D40-95	50/60	B7	MLC-KD6B7
	110	MLC-D40-95	50/60	F7	MLC-KD6F7
	127	MLC-D40-95	50/60	G7	MLC-KD6G7
	220	MLC-D40-95	50/60	M7	MLC-KD6M7
	230	MLC-D40-95	50/60	P7	MLC-KD6P7
	240	MLC-D40-95	50/60	U7	MLC-KD6U7
	380	MLC-D40-95	50/60	Q7	MLC-KD6Q7
	440	MLC-D40-95	50/60	R7	MLC-KD6R7
	230	MLC-F115-150	50/60	P7	MLC-FFP7
	240	MLC-F115-150	50/60	U7	MLC-FFU7
	380	MLC-F115-150	50/60	Q7	MLC-FFQ7
	440	MLC-F115-150	50/60	R7	MLC-FFR7
230	MLC-F185-225	50/60	P7	MLC-FGP7	
240	MLC-F185-225	50/60	U7	MLC-FGU7	
380	MLC-F185-225	50/60	Q7	MLC-FGQ7	
440	MLC-F185-225	50/60	R7	MLC-FGR7	
230	MLC-F265-330	50/60	P7	MLC-FHP7	
240	MLC-F265-330	50/60	U7	MLC-FHU7	
380	MLC-F265-330	50/60	Q7	MLC-FHQ7	
440	MLC-F265-330	50/60	R7	MLC-FHR7	
230	MLC-F400	50/60	P7	MLC-FJP7	
240	MLC-F400	50/60	U7	MLC-FJU7	
380	MLC-F400	50/60	Q7	MLC-FJQ7	
440	MLC-F400	50/60	R7	MLC-FJR7	
230	MLC-F500	50/60	P7	MLC-FKP7	
240	MLC-F500	50/60	U7	MLC-FKU7	
380	MLC-F500	50/60	Q7	MLC-FKQ7	
440	MLC-F500	50/60	R7	MLC-FKR7	
230	MLC-F630	50/60	P7	MLC-FLP7	
240	MLC-F630	50/60	U7	MLC-FLU7	
380	MLC-F630	50/60	Q7	MLC-FLQ7	
440	MLC-F630	50/60	R7	MLC-FLR7	
230	MLC-F780	50/60	P7	MLC-FXP7	
240	MLC-F780	50/60	U7	MLC-FXU7	
380	MLC-F780	50/60	Q7	MLC-FXQ7	
440	MLC-F780	50/60	R7	MLC-FXR7	


Motor control and protection

Motor control and protection

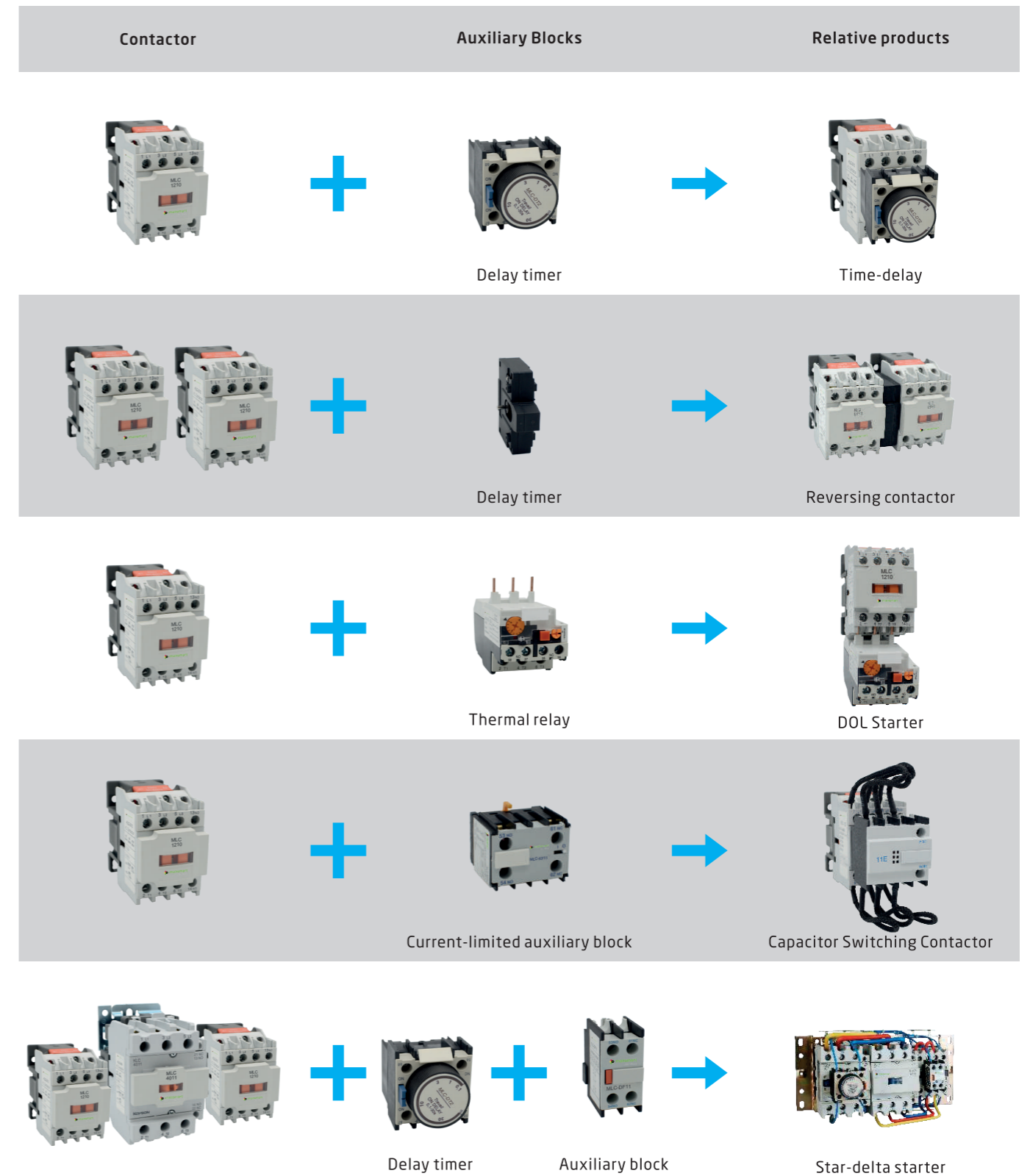
**Ordering information**

	Mounting type	Auxiliary contacts 	Number of Auxiliary contact	Conventional heating Current (A)	Type code
Front Auxiliary contact blocks for MLC-K 	Front	0 2	2	10	MLC-KF02
	Front	1 1	2	10	MLC-KF11
	Front	2 0	2	10	MLC-KF20
	Front	0 4	4	10	MLC-KF04
	Front	1 3	4	10	MLC-KF13
	Front	2 2	4	10	MLC-KF22
	Front	3 1	4	10	MLC-KF31
	Front	4 0	4	10	MLC-KF40
Front Auxiliary contact blocks for MLC-D/F 	Front	0 2	2	10	MLC-DF02
	Front	1 1	2	10	MLC-DF11
	Front	2 0	2	10	MLC-DF20
	Front	0 4	4	10	MLC-DF04
	Front	1 3	4	10	MLC-DF13
	Front	2 2	4	10	MLC-DF22
	Front	3 1	4	10	MLC-DF31
	Front	4 0	4	10	MLC-DF40
Side 	Side	1 1	2	10	MLC-DS11

	Delay type	Auxiliary contacts 	Time-delay range	Type code
Front time-delay auxiliary contact 	Making time-delay	1 1	0.1-3s	MLC-DT0
			0.1-30s	MLC-DT2
			10-180s	MLC-DT4
	Breaking time-delay	1 1	0.1-3s	MLC-DD0
			0.1-30s	MLC-DD2
			10-180s	MLC-DD4

	Delay type	Type code
Mechanical interlock block 	For MLC-D9-32	MLC-DMI1
	For MLC-D40-95	MLC-DMI2

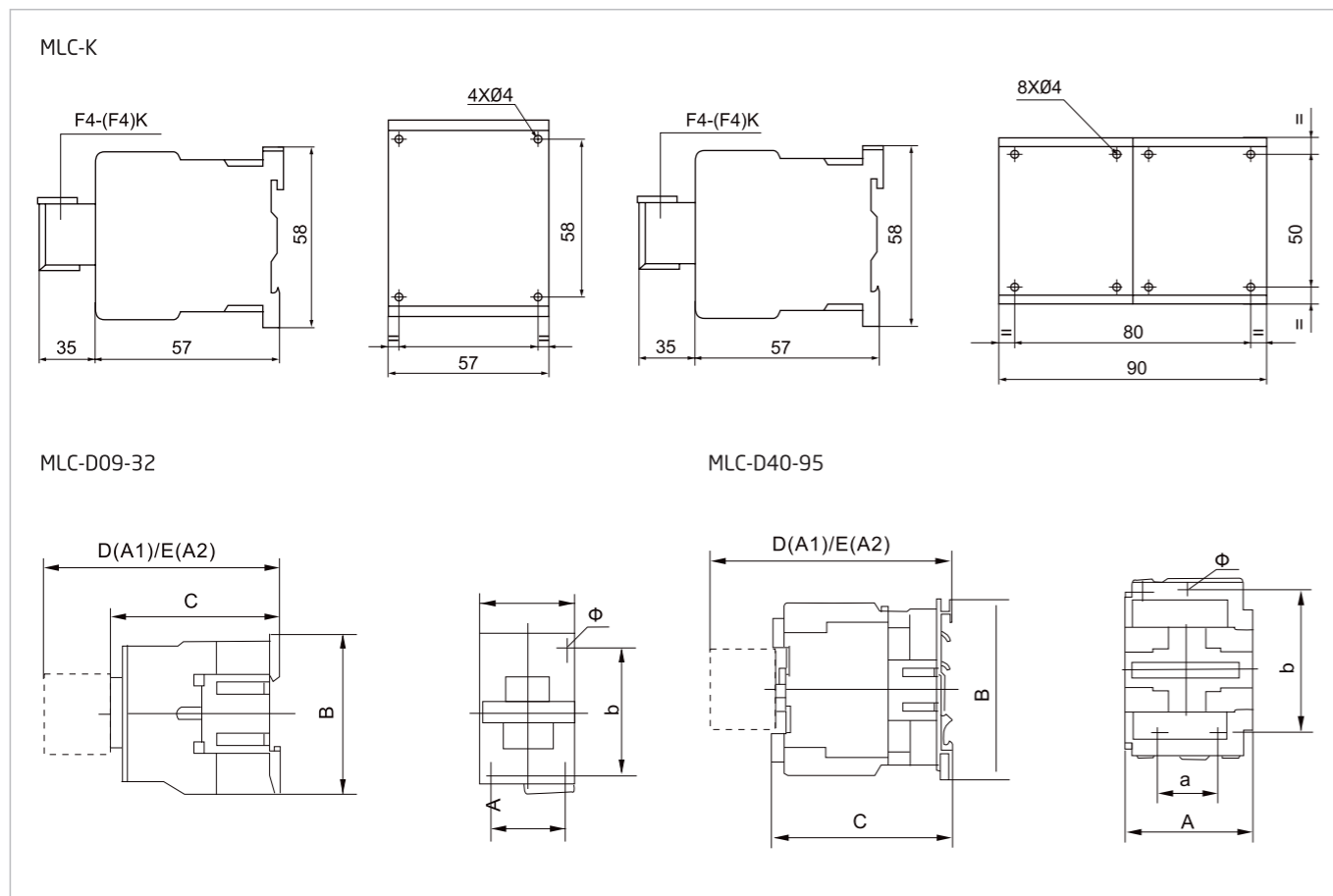
**Derivative products of AC contactor, please refer to pictures below**



Motor control and protection

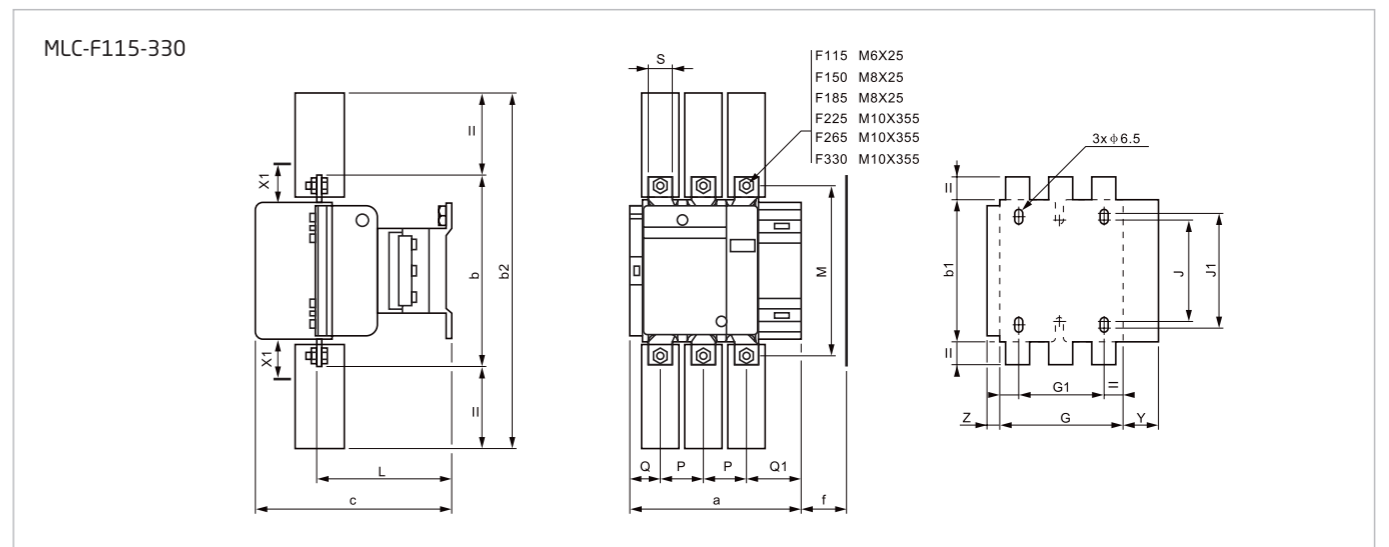
Motor control and protection

**Outline and installation dimensions**

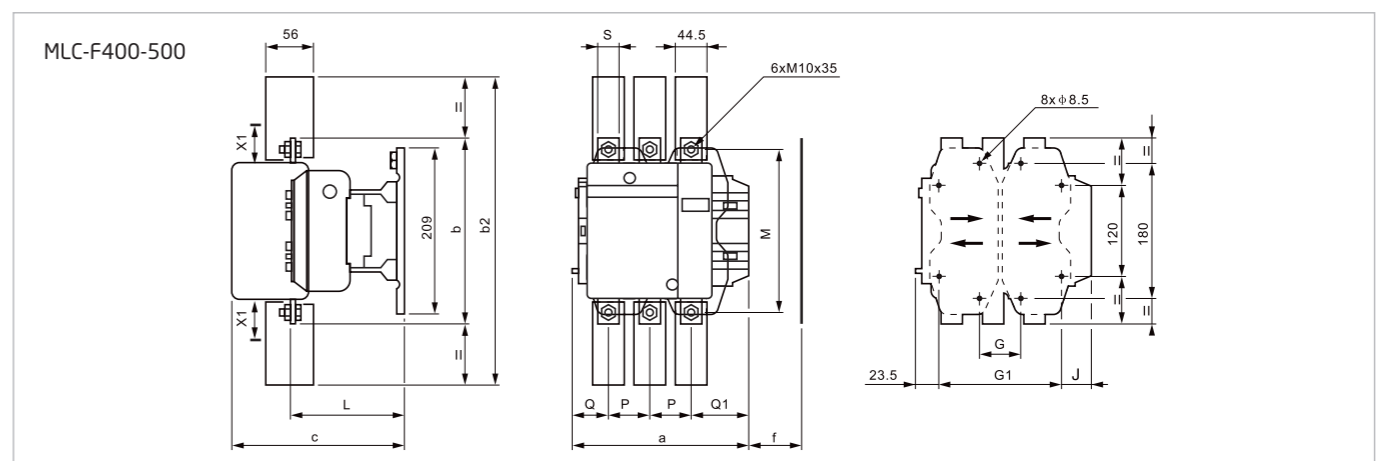


Model	Outline dimensions(mm)					Installation dimensions(mm)			
	A	B	C	D	E	a	b	∅	
3P	MLC-D09-12	47	76	82	113	133	34/35	50/60	2-∅4.5
	MLC-D18	47	76	87	118	138	34/35	50/60	2-∅4.5
	MLC-D25	57	86	95	126	146	40	48	2-∅4.5
	MLC-D32	57	86	100	131	151	40	48	2-∅4.5
	MLC-D40-65	77	129	116	145	165	40	100/110	3-∅6.5
4P	MLC-D80-95	87	129	127	156	176	40	100/110	3-∅6.5
	MLC-D09-12	47	76	82	113	133	34/35	50/60	2-∅4.5
	MLC-D25	57	86	95	126	146	40	48	2-∅4.5
	MLC-D40-65	86	129	116/129	145	165	40	100/110	3-∅6.5
	MLC-D80-95	97	129	127/140	156	176	40	100/110	3-∅6.5

**Outline and installation dimensions**



MLC-F	Outline dimensions(mm)																			
	a	b	b1	b2	C	f	G	G1	J	J1	L	M	P	Q	Q1	S	1	Y	Z	
115	3	163.5	162	137	265	171	131	106	80	106	120	107	147	37	29.5	60	20	26	44	13.5
	4	200.5	162	137	265	171	131	143	80	106	120	107	147	37	29.5	60	20	26	44	13.5
150	3	163.5	170	137	301	171	131	106	80	106	120	107	150	40	26	57.5	20	34	44	13.5
	4	200.5	170	137	301	171	131	143	80	106	120	107	150	40	26	55.5	20	34	44	13.5
185	3	168.5	174	137	305	181	130	111	80	106	120	113.5	154	40	29	59.5	20	34	44	13.5
	4	208.5	174	137	305	181	130	151	80	106	120	113.5	154	40	29	59.5	20	34	44	13.5
225	3	168.5	197	137	364	181	130	111	80	106	120	113.5	172	48	21	51.5	25	44.5	44	13.5
	4	208.5	197	137	364	181	130	151	80	106	120	113.5	172	48	17	47.5	25	44.5	44	13.5
265	3	201.5	203	145	375	213	147	142	96	106	120	141	178	48	39	66.5	25	44.5	38	21.5
	4	244.5	203	145	375	213	147	190	96	106	120	141	178	48	34	66.5	25	44.5	38	21.5
230	3	213	206	145	375	219	147	154.5	96	106	120	145	181	48	43	74	25	44.5	38	20.5
	4	261	206	145	375	219	147	202.5	96	106	120	145	181	48	43	74	25	44.5	38	20.5

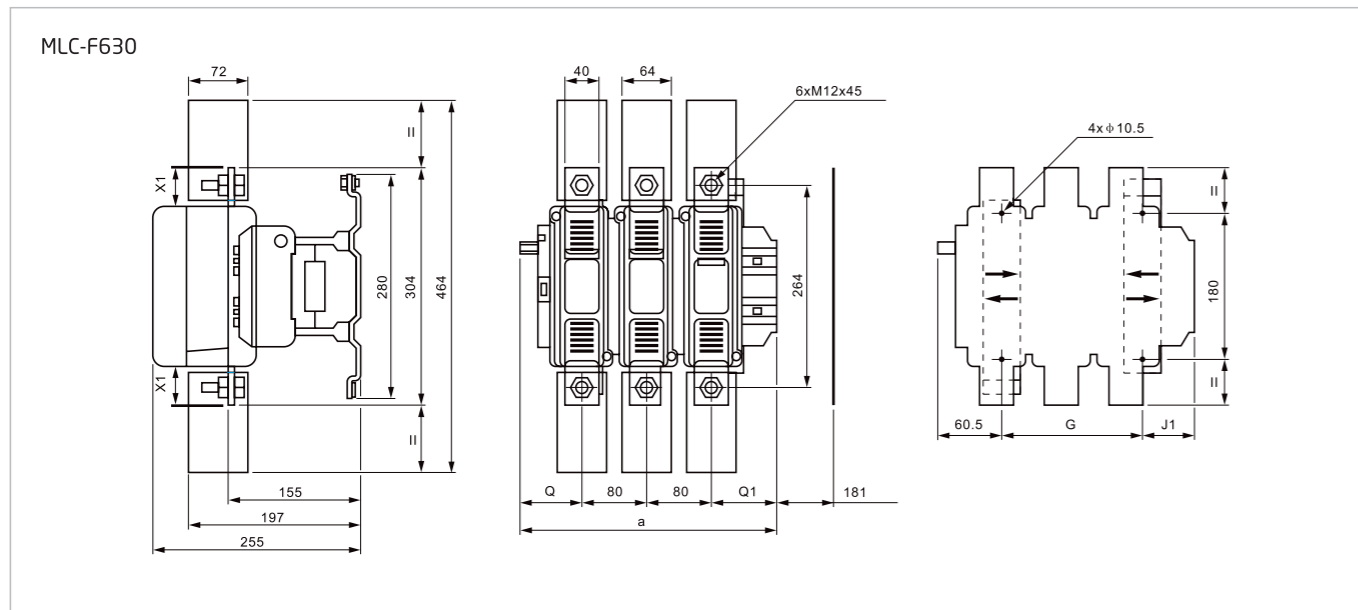


MLC-F	Outline dimensions(mm)																		
	a	b	b2	c	f	G*	G min.	G max.	G1*	G1 min.	G1 max.	J	L	M	P	Q	Q1	S	
400	3	213	206	375	219	119	80	66	102	170	156	192	19.5	145	181	48	69	96	25
	4	213	206	375	219	119	80	66	102	170	156	192	19.5	145	181	48	43	74	25
500	3	261	206	375	219	119	80	66	150	170	156	240	67.5	145	181	48	43	74	25
	4	233	238	400	232	141	80	66	120	170	156	210	39.5	146	208	55	76	102	30
	3	233	238	400	232	141	80	66	120	170	156	210	39.5	146	208	55	46	77	30
	4	288	288	400	232	141	140	66	175	230	156	265	34.5	146	208	55	46	77	30

Motor control and protection

Motor control and protection

**Outline and installation dimensions**



MLC-F630		Outline dimensions(mm)						
		a	G	G min.	G max.	J1	Q	Q1
630	2P	309	180	100	195	68.5	102	127
630,800	3P	309	180	100	195	68.5	60	89
630	4P	309	240	150	275	68.5	60	89

